

REMARKS

In response to the Office Action mailed May 28, 2010, Applicants respectfully request reconsideration. Claims 1-80 and 82-84 were previously pending in this application. By this amendment, Applicants are canceling claim 50 without prejudice or disclaimer. Claims 1, 36, 43-46, 48, 49, 51-56, 79, 80 and 82 have been amended. As a result, claims 1-49, 51-80 and 82-84 are pending for examination with claims 1, 36, 43, 79 and 80 being independent. No new matter has been added.

Allowable Subject Matter

As a preliminary matter, Applicants thank the Examiner for the indication of allowable subject matter in claims 20, 24-26, 28 and 38-42. The Office Action objected to claims 20, 24-26, 28 and 38-42 and 42-46 as being dependent upon a rejected base claims but indicated that these claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims (the Office Action, page 14).

Applicants have herein amended claim 1 based on the subject matter of claims 24, 25 and 28, which the Office Action indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and based on the subject matter of intervening claim 27.

The Office Action indicated that there is no prior art rejection on independent claim 36 but this claim is rejected under a 35 U.S.C. § 101 rejection. Claim 36 was amended to address the 35 U.S.C. § 101 rejection and is now in condition for allowance.

Objections to the Specification

The Office Action objected to claim 53 due to informalities. In particular, claim 54 had inadvertently been numbered as "53." Applicants have herein corrected this informality. Accordingly, withdrawal of this objection is respectfully requested.

Rejections Under 35 U.S.C. §101

The Office Action rejects claims 36, 43-48, 53, 54 (as correctly numbered), 78, 80 and 82 under 35 U.S.C. §101, stating that the claims are directed to non-statutory subject matter. Without acceding to the propriety of the rejections, Applicants have herein amended independent claims 36, 43 and 80 and dependent claim 82 to recite, *inter alia*, at least one processor. Claims 36 and 43 and respective dependent claims and claims 80 and 82 are therefore statutory and the withdrawal of these rejections is respectfully requested.

Rejections Under 35 U.S.C. §102

The Office Action rejects claims 1-3, 5-19, 21-23, 27, 29-35, 37, 43-45, 47-56, 65-69, 78-80 and 82-84 (including independent claims 1, 43, 79 and 80) under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 6,421,655 ("Horvitz"). Applicants respectfully traverse the rejections to the extent they are maintained over the claims as amended herein.

A. Independent Claim 1

Claim 1 has been amended based on the subject matter of claims 24, 25 and 28, which the Office Action indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and based on the subject matter of intervening claim 27. Accordingly, the rejection of claim 1 under 35 U.S.C. §102(b) is moot and claim 1 is in condition for allowance. Claims 2-35, 37-42, 82 and 84 depend from claim 1 and are allowable based at least on their dependency.

B. Independent Claim 43

Claim 43, as amended, recites:

A method of analyzing data, comprising:
with the at least one processor:

obtaining perception evidence for a perception system from a plurality of sensors;
determining a context from the perception evidence;

analyzing the perception evidence utilizing an analysis policy to determine *a perceived system value indicating a value of utilization of computing resources of a computer system by the perception system*; and
employing the perceived system value to limit utilization of the computing resources by determining at least one sensor from the plurality of sensors to obtain the perception evidence and a time at which to obtain the perception evidence by the at least one sensor, wherein the time is selected based on an intensity of interaction of a user with the computer system.
(Emphasis added).

Horvitz does not meet all limitations of claim 43.

The Office Action (page 5) states that Horvitz teaches analyzing the perception evidence, as claimed, in col. 9, lines 15-23. In the cited portion, Horvitz states that a flowchart of a method of the VOI/EVI information-gathering process “is desirably realized at least in part as one or more programs running on a computer—that is, as a program executed from a computer-readable medium such as a memory by a processor of a computer. The program is desirably storable on a machine-readable medium such as a floppy disk or a CD-ROM, for distribution and installation and execution on another computer” (Horvitz, col. 9, lines 15-24). However, Horvitz does not describe “analyzing the perception evidence utilizing an analysis policy to determine *a perceived system value indicating a value of utilization of computing resources of a computer system by the perception system*,” as recited in amended claim 43 (emphasis added).

As another distinguishing feature, claim 43 recites “employing the perceived system value to limit utilization of the computing resources by determining at least one sensor from the plurality of sensors to obtain the perception evidence and a time at which to obtain the perception evidence by the at least one sensor, wherein the time is selected based on an intensity of interaction of a user with the computer system.” Horvitz does not teach or suggest the above-quoted limitation of claim 43 either.

The Office Action (page 5) contends that Horvitz teaches, in col. 15, lines 23-27 and in col. 16, lines 12-18, employing the perceived system value as recited in claim 43. However, in the cited portion, Horvitz teaches that using a decision-theoretic approach, an action is selected, and then followed—and this process continues until the cost of continuing the conversational interaction outweigh the benefits, at which time some action may be taken in the world which in

accordance with the overall goal of maximizing expected utility under uncertainty (Horvitz, col. 15, lines 21-27). Thus, in this portion, in contrast to claim 43, Horvitz does not mention limiting utilization of computing resources by employing a perceived system value indicating a value of utilization of computing resources of a computer system to determine at least one sensor from the plurality of sensors and a time to collect the perception evidence.

In another cited portion, Horvitz states that context-sensitive utilities can be used in the computation of threshold probabilities, and that value of information (VOI) can be defined as functions of such observations as the user being hurried, or of observations about the conversational dialog itself such as the number of questions that have already been asked of users (Horvitz, col. 16, lines 13-18). However, again, Horvitz does not describe limiting utilization of computing resources, as claimed.

Accordingly, claim 43 patentably distinguishes over Horvitz and is in allowable condition. Claims 44-49, 51-78 and 83 depend from claim 43 and are allowable for at least the same reasons. Accordingly, withdrawal of the rejection of claims 43-49, 51-78 and 83 is respectfully requested.

C. Independent Claim 79

Horvitz does not teach or suggest all of the limitations of claim 79.

Claim 79 has been amended to recite, *inter alia*,

a plurality of sensors to collect a plurality of features as perception evidence;

control means to *limit utilization of computing resources of a computer system by a perception system by controlling the plurality of sensors to selectively gather the perception evidence obtained via the perception system*; and

analyzing means to:

analyze the perception evidence utilizing an analysis policy to determine context of use of the computer system by one or more users in which the perception system is operating, and

guide the control means to limit the utilization of the computing resources by determining which features from the plurality of features to collect as the perception evidence depending on a value of the features for limiting the utilization of the computing resources by the perception system, based on the determined context; wherein

the control means selects at least one sensor from the plurality of sensors to collect the features.
(Emphasis added)

As should be clear from the above discussion of the cited reference, Horvitz does not teach or suggest at least the limitations of claim 79 highlighted above that relate to limiting utilization of computing resources.

In view of the above, claim 79 patentably distinguishes over Horvitz and is in allowable condition.

Accordingly, withdrawal of the rejection of claim 79 is respectfully requested.

D. Independent Claim 80

Horvitz does not teach or suggest all of the limitations of claim 80.

Claim 80 has been amended to recite, *inter alia*,

a first component of a perception system that receives a data query relating to data to determine a context in which the perception system is operating so that to limit utilization of computing resources of a computer system by the perception system, wherein the data comprises perception evidence pertaining to at least one feature collected by a plurality of sensors; and

a second component that:

analyzes, with the at least one processor, volatility versus persistence of observations of at least one state of the data over time to establish reasonableness in timing of at least one reply to the query, and

selects at least one sensor from the plurality of sensors to collect the perception evidence pertaining to the at least one feature to limit the utilization of the computing resources based on a value of the at least one feature in the context, wherein selection of the at least one feature depends on an intensity of interaction of a user with the computer system.

As should be clear from the above discussion of the cited reference, Horvitz does not teach or suggest limitations of claim 80 relating to limiting utilization of computing resources. Accordingly, Horvitz does not teach or suggest a first component of a perception system that “receives a data query relating to data to determine a context in which the perception system is operating *so that to limit utilization of computing resources of a computer system by the*

perception system, wherein the data comprises perception evidence pertaining to at least one feature collected by a plurality of sensors,” as recited in claim 80 (emphasis added). Furthermore, Horvitz does not teach or suggest a second component that: “selects at least one sensor from the plurality of sensors to collect the perception evidence pertaining to the at least one feature *to limit the utilization of the computing resources* based on a value of the at least one feature in the context,” as also recited in claim 80 (emphasis added).

As another distinguishing feature, Horvitz does not describe that “the selection of the at least one feature depends on an intensity of interaction of a user with the computer system,” as also recited in claim 80. The Office Action (page 7) states that Horvitz teaches the above-quoted limitation of claim 80 in col. 15, lines 23-27 and in col. 16, lines 12-18. However, as discussed above, in these portions, Horvitz does not discuss selecting features depending on an intensity of interaction of a user with the computer system.

As another reason that the rejection should be withdrawn, the Office Action does not cite to any particular portion of Horvitz as teaching a second component that: “analyzes, with the at least one processor, volatility versus persistence of observations of at least one state of the data over time to establish reasonableness in timing of at least one reply to the query,” as recited in claim 80. It does not appear that Horvitz meets this limitation of claim 80.

Accordingly, claim 80 patentably distinguishes over Horvitz and is in allowable condition.

Accordingly, withdrawal of the rejection of claim 80 is respectfully requested.

General Comments On Dependent Claims

Each of the dependent claims depends from a base claim that is believed to be in condition for allowance, and Applicants believe that it is unnecessary at this time to argue the allowability of each of the dependent claims individually. Applicants do not, however, necessarily concur with the interpretation of the dependent claims as set forth in the Office Action, nor do Applicants concur that the basis for the rejection of any of the dependent claims is

proper. Therefore, Applicants reserve the right to specifically address the patentability of the dependent claims in the future, if deemed necessary.

CONCLUSION

In view of the above amendment, Applicants believe the pending application is in condition for allowance. A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, the Director is hereby authorized to charge any deficiency or credit any overpayment in the fees filed, asserted to be filed, or which should have been filed herewith to our Deposit Account No. 23/2825, under Docket No. M1103.70734US00 from which the undersigned is authorized to draw.

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Respectfully submitted,

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